(12) UK Patent Application (19) GB (11) 2 368 824 (13) A

(43) Date of A Publication 15.05.2002

(21) Application No 0125573.6

(22) Date of Filing 25.10.2001

(30) Priority Data
(31) 0027495 (32) 10.11.2000 (33) GB

(71) Applicant(s)
Colin Allen Lackey
270 Preston Road, Standish, WIGAN, WN6 0NY, United Kingdom

(72) Inventor(s)
Colin Allen Lackey

(74) Agent and/or Address for Service
Appleyard Lees
15 Clare Road, HALIFAX, West Yorkshire, HX1 2HY, United Kingdom

(51) INT CL[7]
B62B 9/12 // A44B 21/00 , B62B 9/10

(52) UK CL (Edition T)
B7B BTC B407

(56) Documents Cited
GB 2334010 A
US 5522121 A
US 4805938 A
US 5918892 A
US 5338096 A

(58) Field of Search
UK CL (Edition T) **B7B BTC BTF1**
INT CL[7] **A44B 21/00 , B62B 3/02 7/14 9/00 9/10 9/12 9/26**
WPI, EPODOC, JAPIO

(54) Abstract Title
A convertible pushchair assembly

(57) A pushchair assembly 10 comprises a first pushchair 12 and second pushchair 14. The first pushchair 12 is secured to second pushchair 14 by a first securement member 20. The first securement member 20 enables the pushchairs to pivot relatively to each other between a first configuration in which the pushchairs 12, 14 are in tandem and a second configuration in which the first and second pushchairs 12, 14 are located side by side.

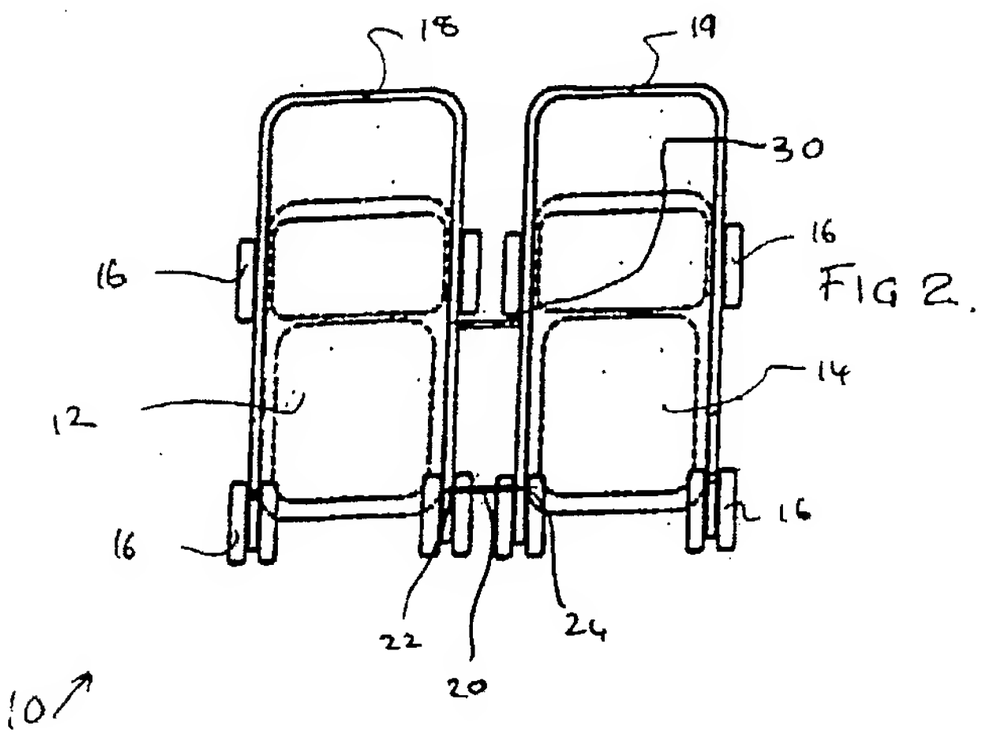
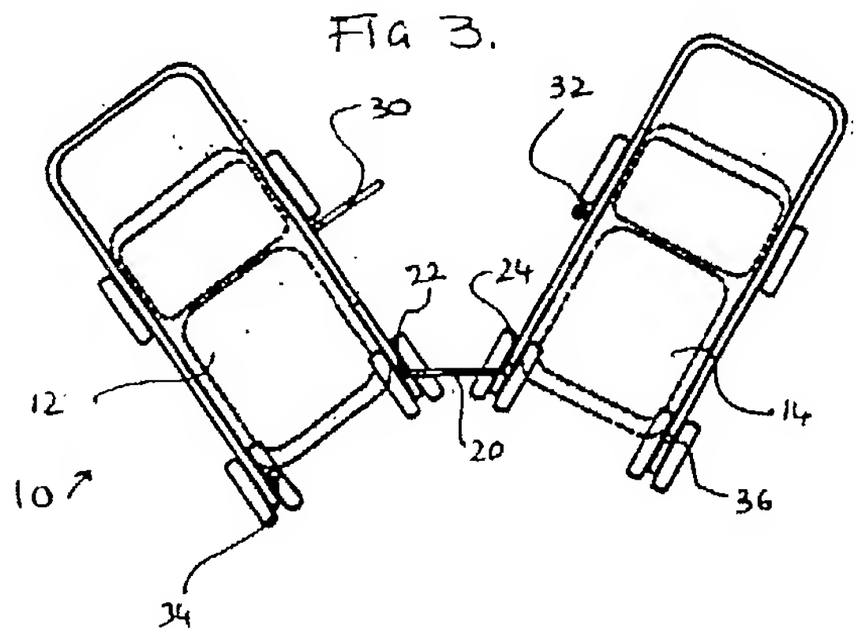


FIG 2.

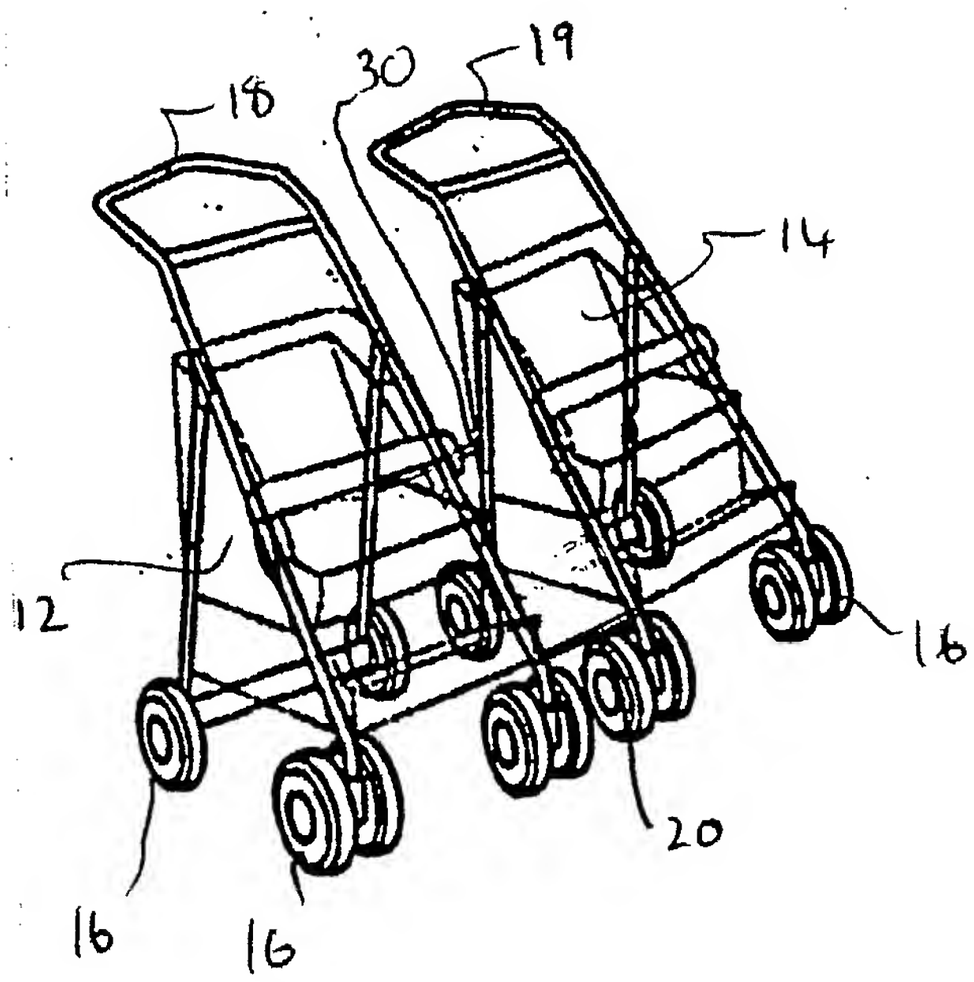
FIG 3.



GB 2 368 824 A

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

Fig 1.



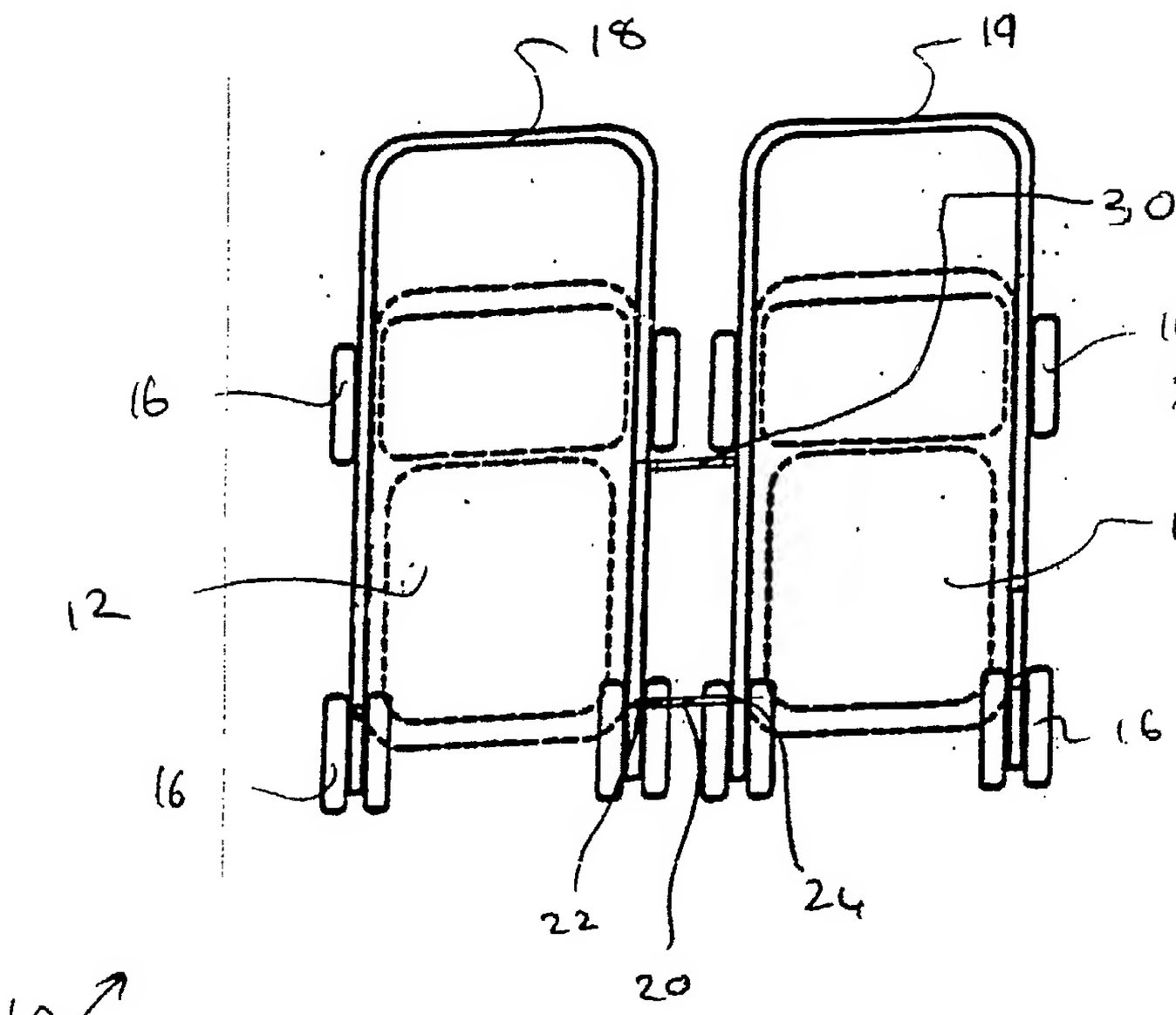
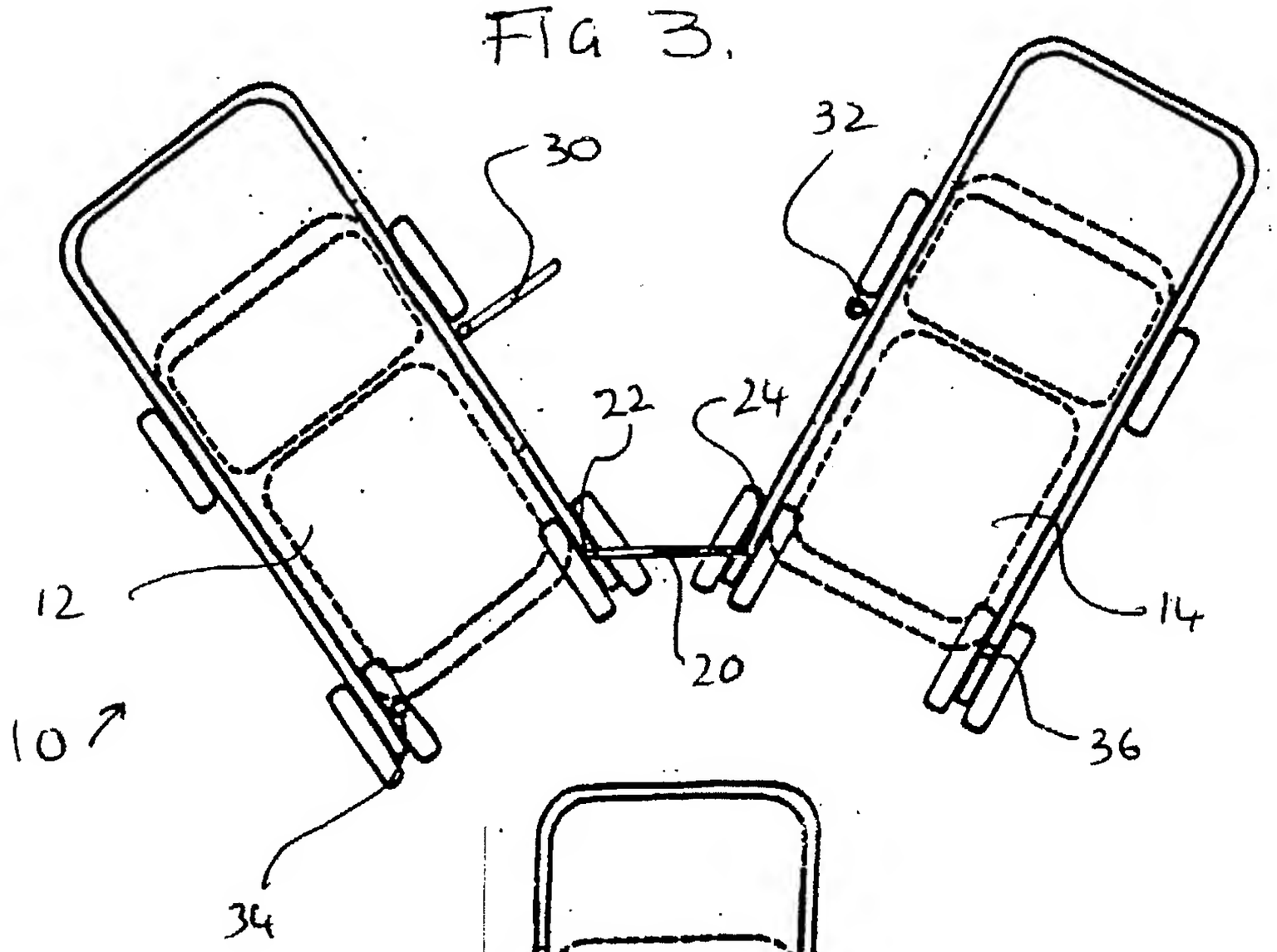


FIG 2.

FIG 3.



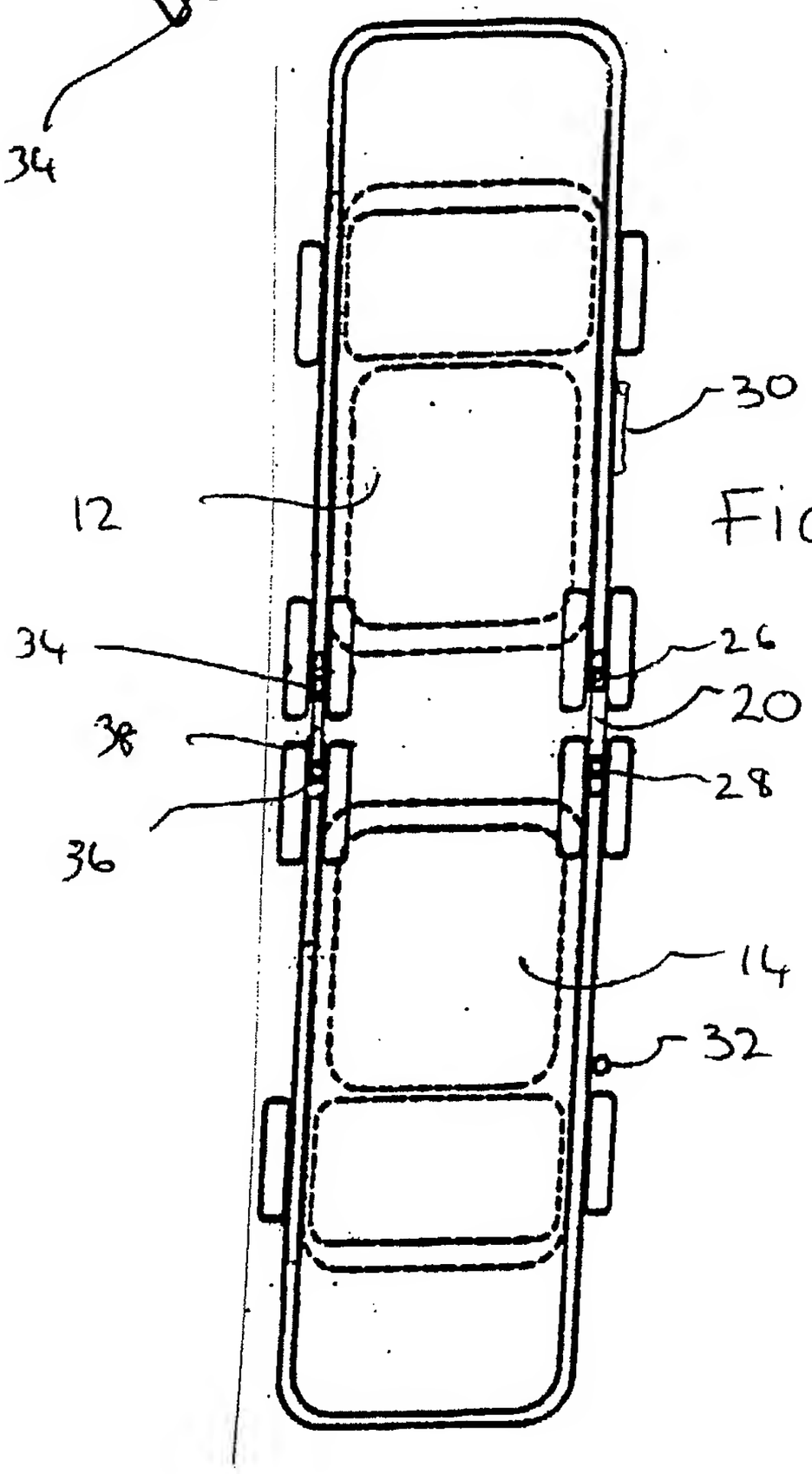


FIG. 4

FIG 5

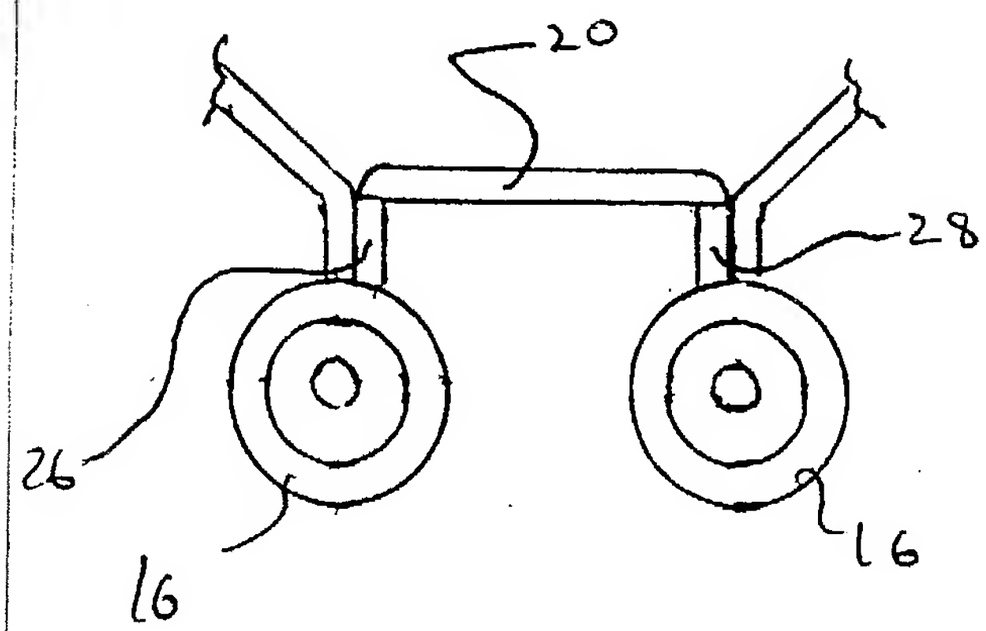


FIG. 6.

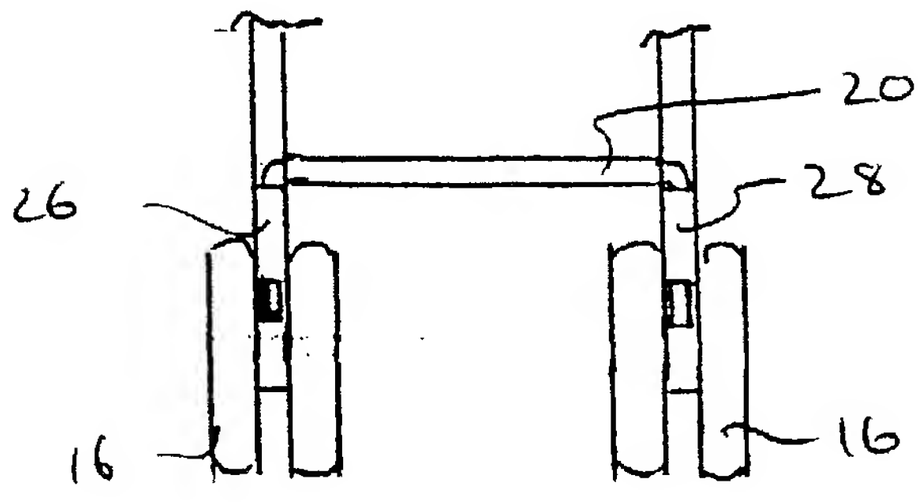
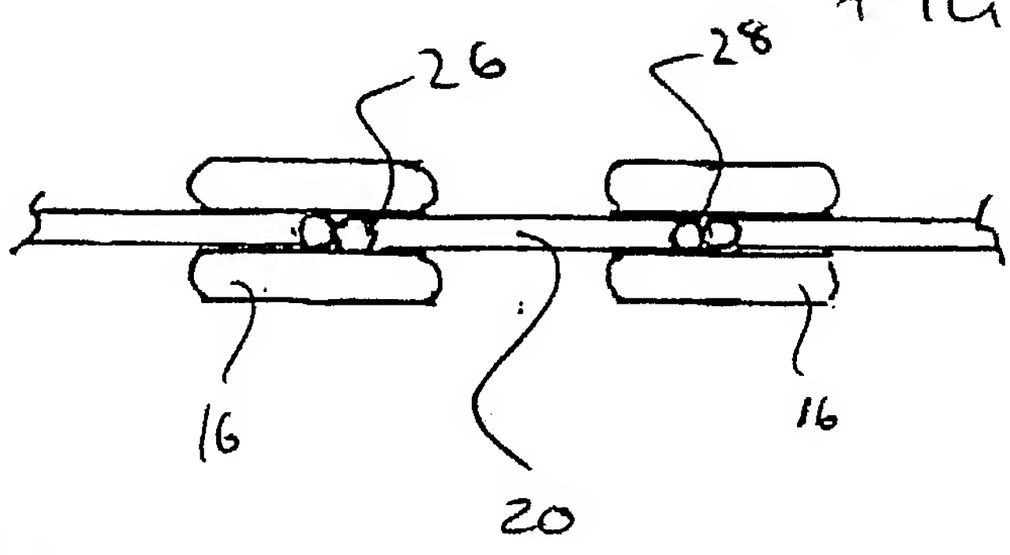


FIG 7.



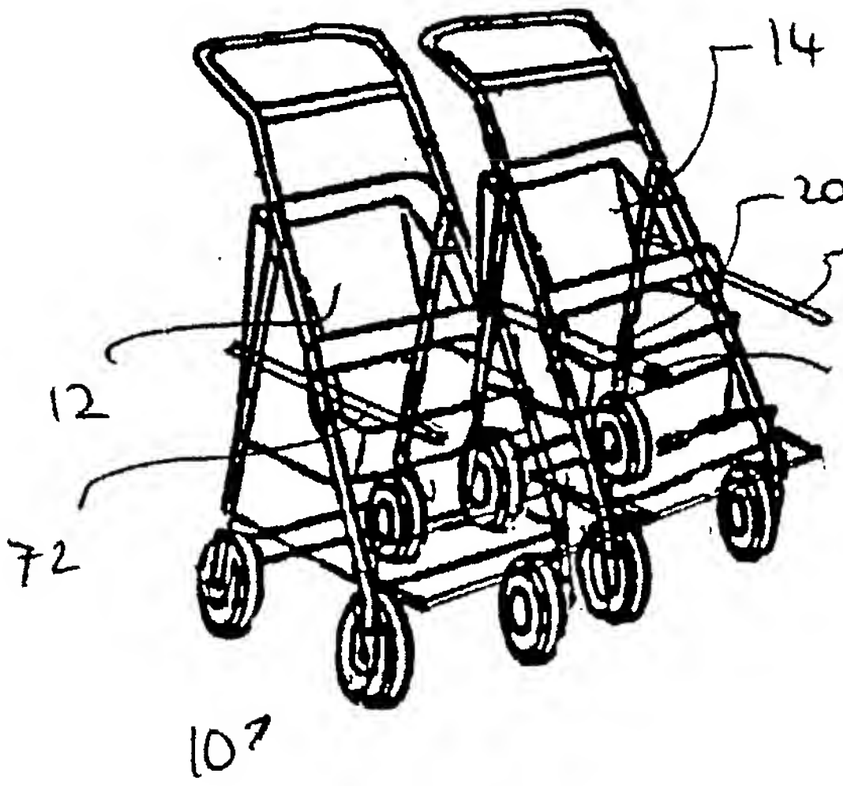


FIG. 8

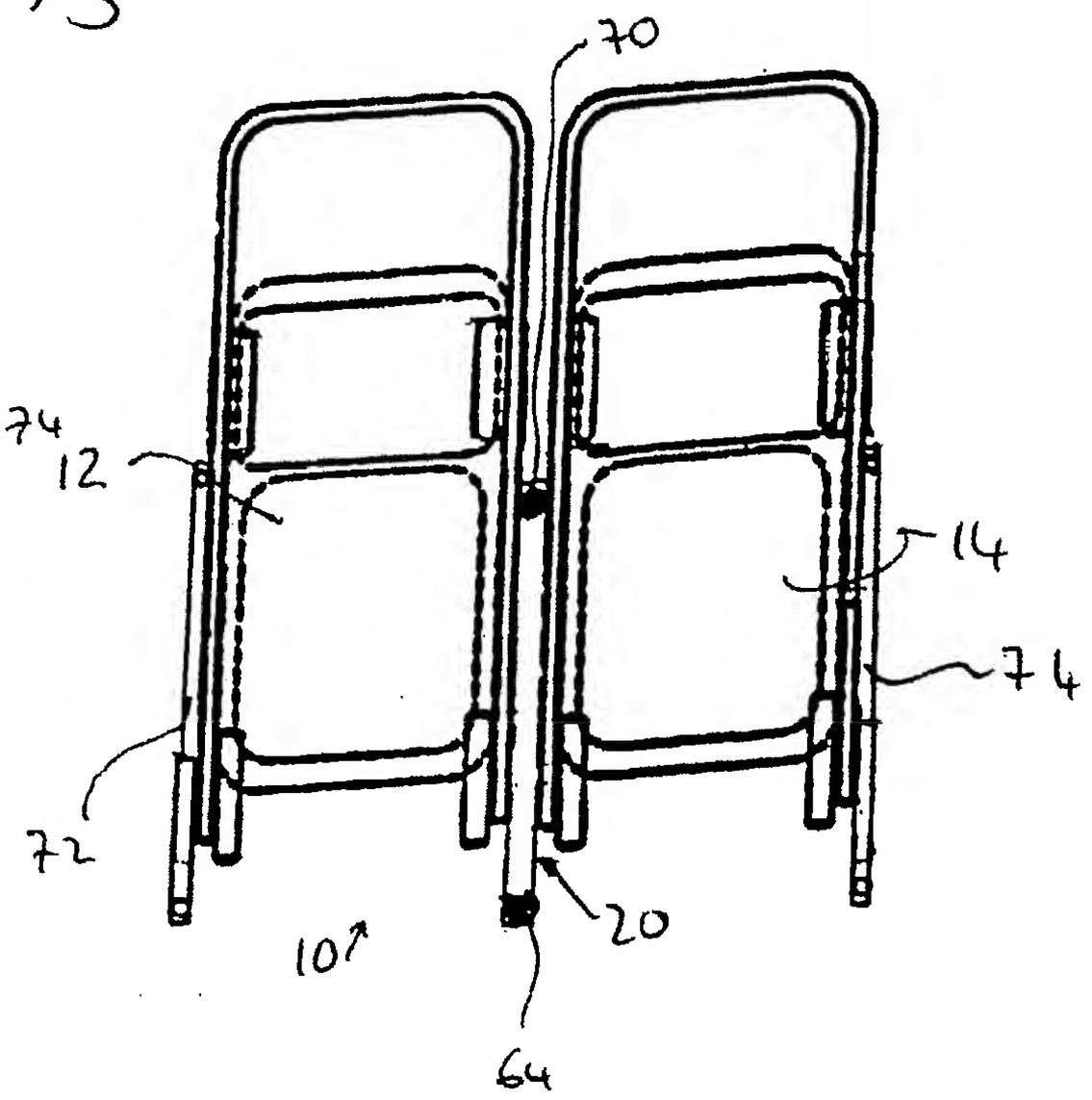


FIG. 9

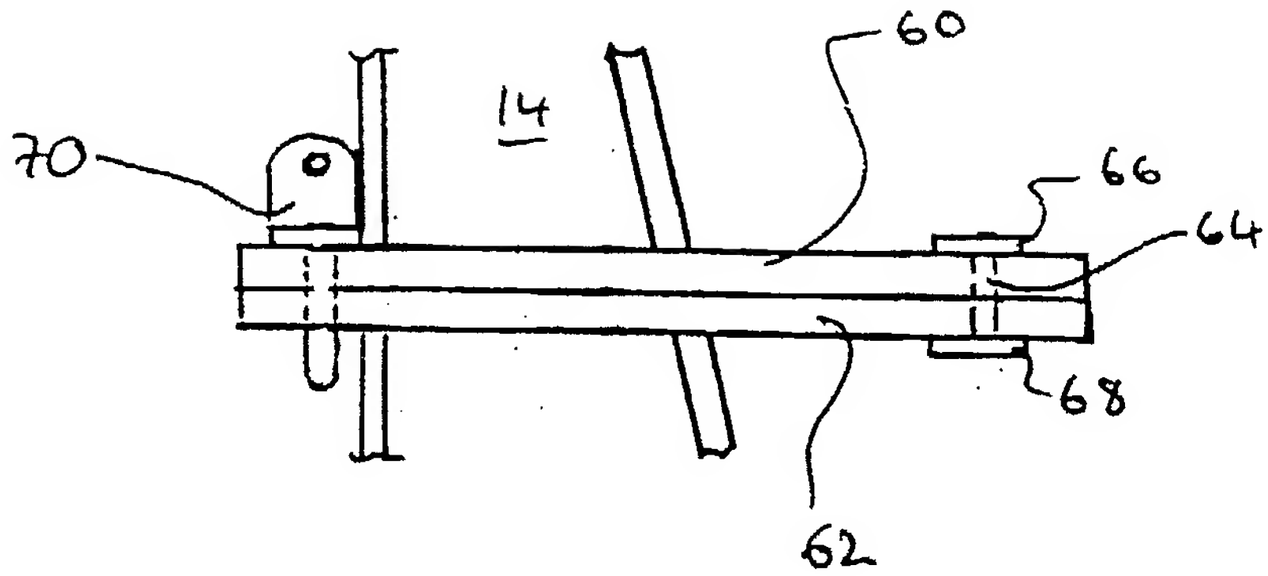


FIG. 10

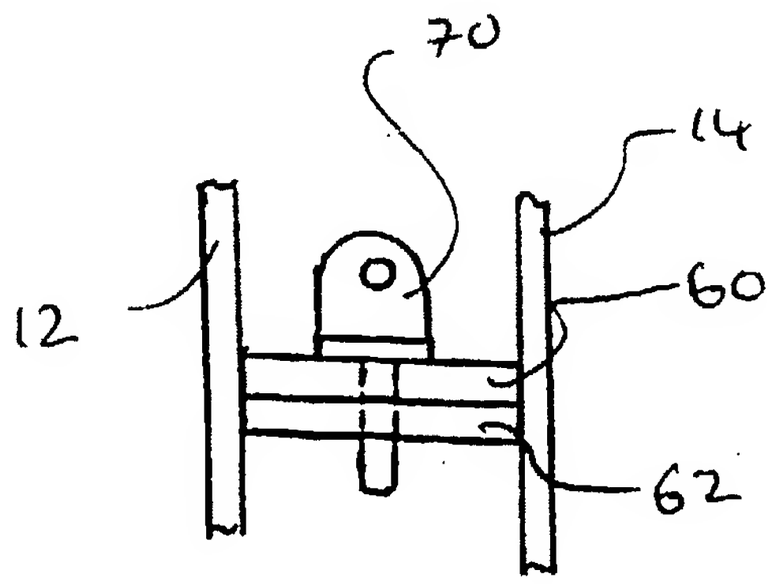


FIG. 11

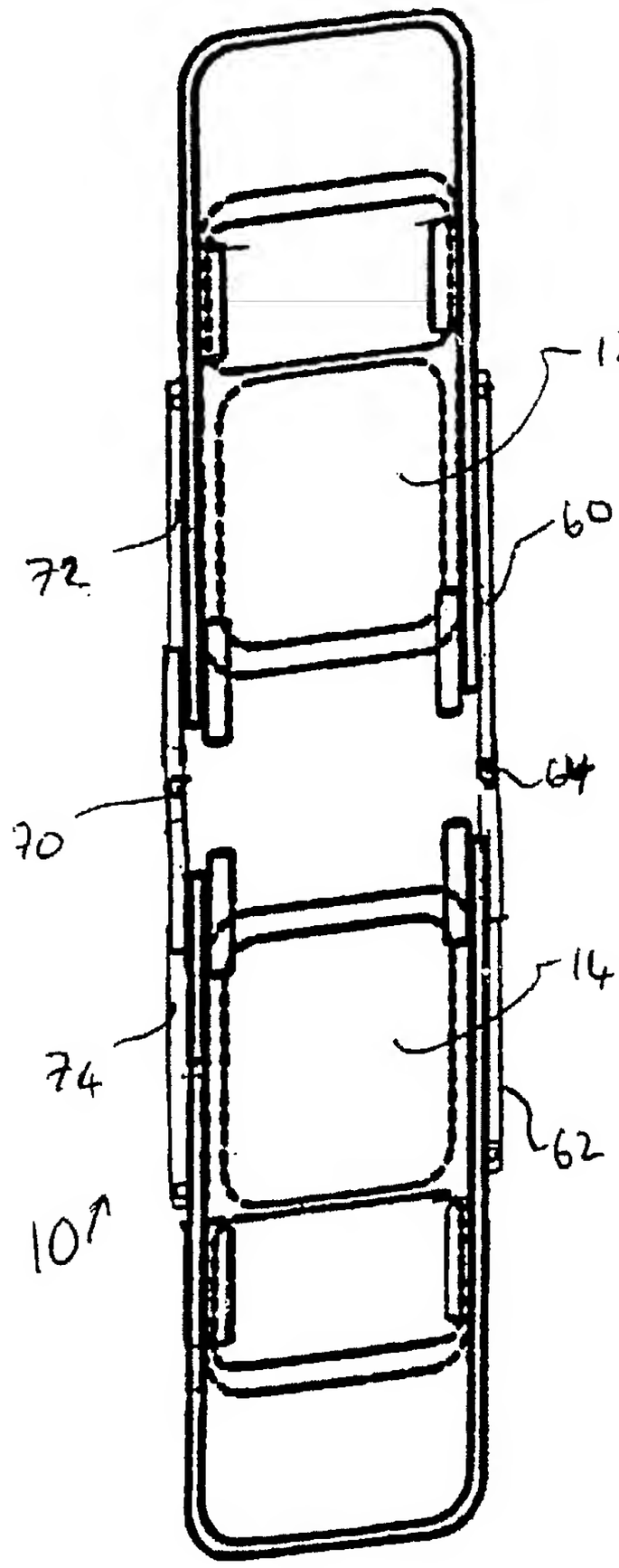


FIG. 12

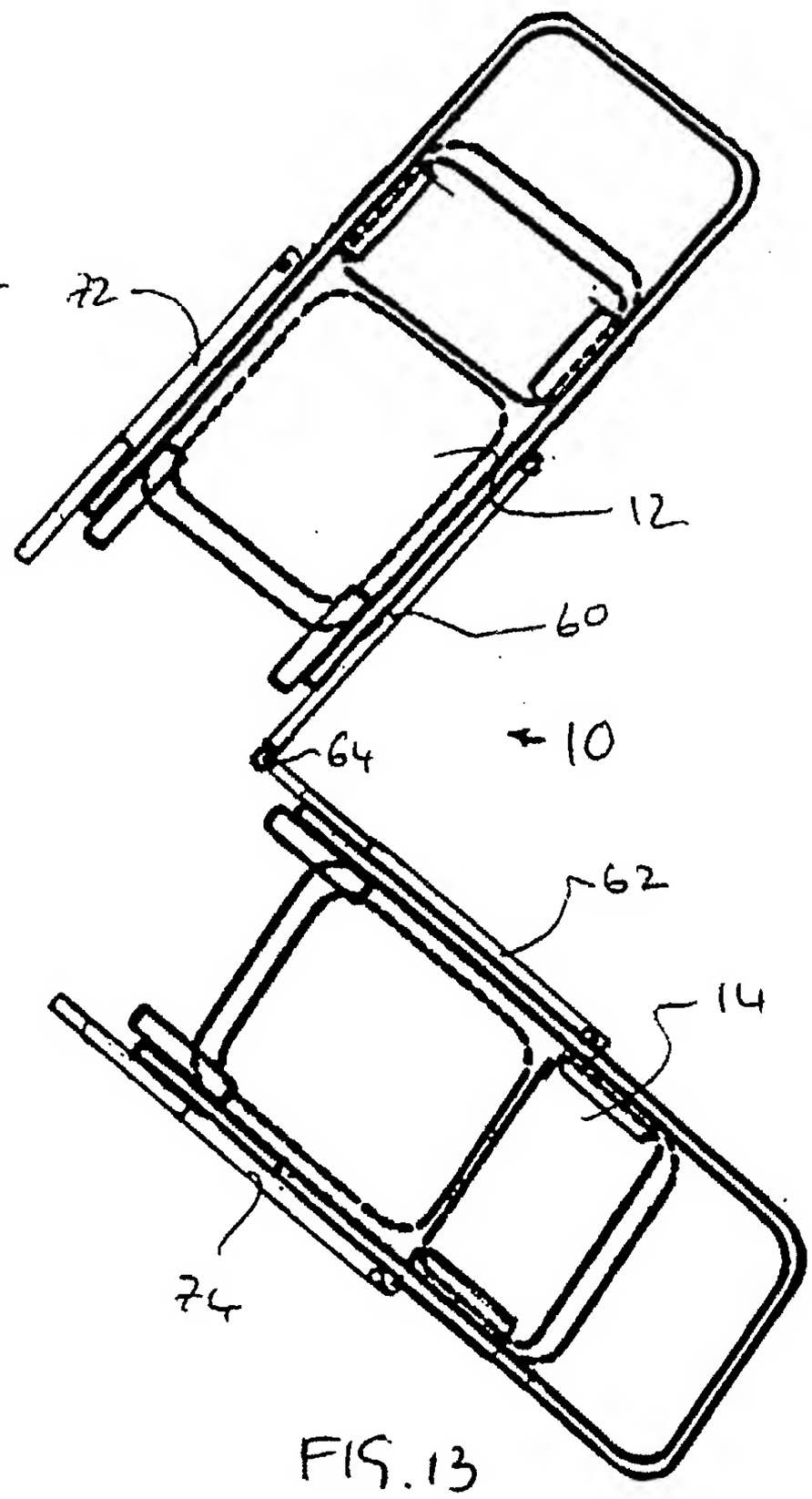


FIG. 13

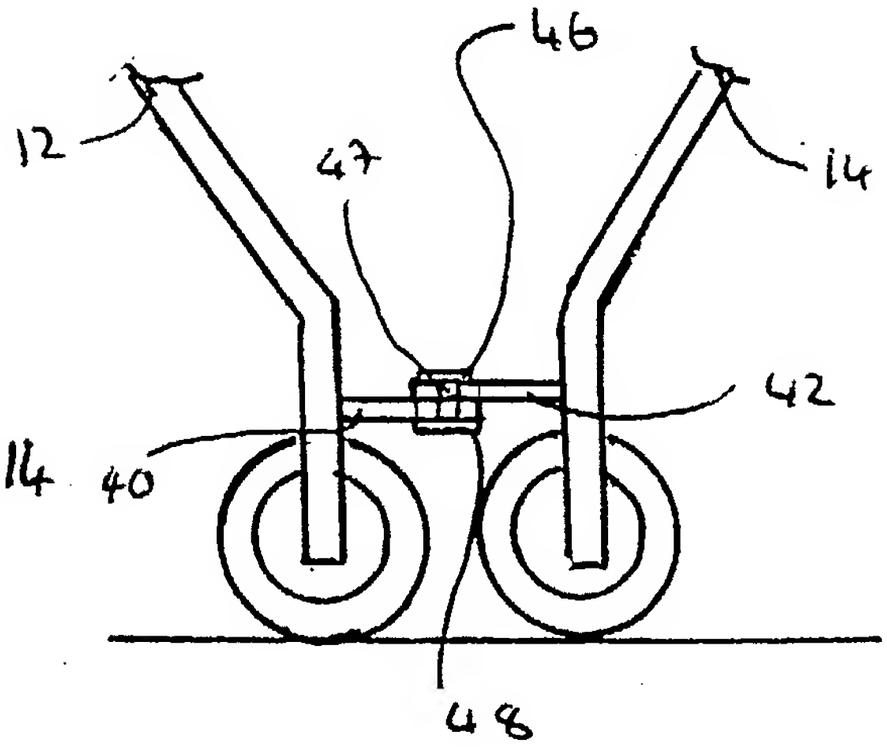


FIG. 14

2368824

IMPROVEMENTS IN AND RELATING TO PUSHCHAIRS

Field of the Invention

The present invention relates to pushchair assemblies, a method of reconfiguring a pushchair assembly and especially, but not limited to, a securement member for pushchair assemblies which secures pushchairs together.

Background to the Invention

Twin pushchairs or prams are currently available in either a tandem configuration or a side by side configuration. A tandem configuration, in which a first pushchair is located in front of or behind a second pushchair, is advantageous in certain situations, for example when travelling along narrow passageways or in busy areas. Alternatively, a side by side configuration, in which a first pushchair is located laterally adjacent to a second pushchair, is easy to steer and manoeuvre over certain obstacles, for example mounting kerbs. However, conventional pushchair assemblies or prams are only available in a single configuration. The term pushchair is defined to encompass prams, buggys, strollers and the like.

It is an aim of the present invention to overcome at least one problem associated with the prior art whether referred to herein or otherwise.

Summary of the Invention

According to a first aspect of the present invention there is provided a pushchair assembly comprising a first pushchair and a second pushchair in which the first pushchair is secured to the second pushchair by a first securement member in both a first configuration, in which the first pushchair is located in front of the second pushchair, and a second configuration, in which the first pushchair is located adjacent to one side of the second pushchair.

Preferably the first securement member pivotally secures the first pushchair to the second pushchair.

Preferably the first securement member comprises an elongate member. Preferably a first end of the first securement member engages with the first pushchair and preferably a second end of the first securement member engages with the second pushchair.

Preferably the first securement member is pivotally engaged to the first pushchair. Preferably the first securement member is pivotally engaged to the second pushchair.

Preferably the first securement member is arranged, in use, to engage a part of the first and second pushchair at a location adjacent to a respective front wheel.

The first pushchair may face the second pushchair in the first configuration.

Preferably the assembly comprises a second securement member which may, in addition with the first securement member, secure the first pushchair to the second pushchair in the first configuration. The second securement member may, in addition with the first securement member, secure the first pushchair to the second pushchair in the second configuration.

The second securement member may comprise an elongate member. Preferably a first end of the second securement member engages with the first pushchair and the second end of the second securement member may engage with the second pushchair. The second securement member may be mounted to one of the pushchairs and may be selectively engaged with the other pushchair. The first pushchair may have an engagement sleeve mounted thereon. The second pushchair may have an engagement sleeve mounted thereon. The or each engagement sleeve preferably co-operates with an end of the second securement member.

Preferably the second securement member is arranged, in use, to engage a part of the first and second pushchair at a location rearwardly and preferably above the first securement member. Preferably the second securement member is arranged, in use, to engage a part of a rear frame member or armrest of the first pushchair and the second pushchair.

Preferably the assembly comprises securement means which may, in addition with the first securement member, secure the first pushchair to the second pushchair in the second configuration. The securement means may comprise a third

securement member. Alternatively, the securement means may comprise the second securement member.

The third securement member may comprise an elongate member. Preferably a first end of the elongate member engages with the first pushchair and the second end of the elongate member may engage with the second pushchair.

The third securement member may be mounted to one of the pushchairs and may be selectively engaged with the other pushchair.

The first pushchair may have an engagement sleeve mounted thereon. The second pushchair may have an engagement sleeve mounted thereon. The or each engagement sleeve preferably co-operates with an end of the third securement member.

The securement means may be arranged, in use, to engage a part of the first and second pushchairs at a location adjacent to a respective front wheel and preferably at a location spaced from the first securement member and preferably adjacent to the other lateral side of the respective pushchair relative to the first securement member.

The first securement member may comprise a first projecting member projecting from the first pushchair. The first securement member may comprise a first projecting member projecting from the second pushchair.

Preferably the first projecting member of the first pushchair is pivotally secured to the first projecting

member of the second pushchair by pivot means. The first projecting member of the first pushchair may have an aperture defined therein. The first projecting member of the second pushchair may have an aperture defined therein. The pivot means may comprise a pin. The pin may locate through the apertures defined in the first projecting members. The pin may have a retaining flange at one or both ends thereof. The or each retaining flange may inhibit or prevent removal of the pin from the apertures defined in the first projecting members.

The projecting members may comprise an armrest of the respective pushchair.

The first projecting members may be projecting members which project from the respective pushchair adjacent to a front wheel.

The first projecting members may have second apertures defined therein. Preferably a securement element is inserted through the apertures to prevent relative pivotal movement between the first projecting members in the second configuration. The securement element may comprise a pin which may be selectively engaged and removed from the apertures.

The pushchairs may have second projecting members to secure the pushchair assembly in the first configuration. The second projecting members may have apertures defined therein. A securement element may locate through the apertures to prevent relative pivotal movement between the second projecting members in the first configuration.

The pushchair assembly may comprise a third pushchair which may be secured to the first or second pushchair. The third pushchair may be secured to the first or second pushchair by a second first securement member.

According to a second aspect of the present invention there is provided a method of reconfiguring a pushchair assembly comprising a first pushchair and a second pushchair, the method comprising securing the first pushchair to the second pushchair with a first securement member in both a first configuration, in which the first pushchair is located in front of the second pushchair, and a second configuration, in which the first pushchair is located adjacent to one side of the second pushchair.

Preferably the method comprises pivoting the first pushchair relative to the second pushchair between the first configuration and the second configuration.

Preferably the method comprises securing the first pushchair to the second pushchair with a second securement member in the first configuration.

Preferably the method comprises securing the first pushchair to the second pushchair with securement means in the second configuration.

Brief Description of the Drawings

The present invention will now be described by way of example only, and with reference to the drawings that follow, in which:

Figure 1 is a perspective view of two pushchairs in a side by side configuration.

Figure 2 is a plan schematic view of two pushchairs in a side by side configuration.

Figure 3 is a plan schematic view of two pushchairs secured by a first securement member in-between a tandem configuration and a side by side configuration.

Figure 4 is a plan schematic view of two pushchairs in a tandem configuration.

Figure 5 is a side schematic view of a first securement member securing a first pushchair to a second pushchair.

Figure 6 is a front schematic view of a first securement member securing a first pushchair to a second pushchair.

Figure 7 is a plan schematic view of a first securement member securing a first pushchair to a second pushchair.

Figure 8 is a perspective view of a further embodiment of a pushchair assembly in a side by side configuration.

Figure 9 is a plan schematic view of a further embodiment of a pushchair assembly in a side by side configuration.

Figure 10 is a side view of a further embodiment of a first securement member.

Figure 11 is a rear view of a further embodiment of a first securement member.

Figure 12 is a plan schematic view of a further embodiment of a pushchair assembly in a tandem configuration.

Figure 13 is a plan schematic view of a further embodiment of a pushchair assembly in-between a tandem configuration and a side by side configuration.

Figure 14 is a side view of another embodiment of a first securement member securing a first pushchair to a second pushchair.

Description of the Preferred Embodiment

The pushchair assembly 10 comprises a first pushchair 12 and a second pushchair 14, as shown in Figure 1 and Figure 2. Each pushchair 12, 14 generally comprises support means for supporting a seated child therein. Each pushchair 12, 14 is mounted on wheels 16 in order to travel over ground by being manually pushed by the respective handles 18, 19.

The first pushchair 12 is secured to the second pushchair 14 by a first securement member 20. The first securement member 20 is secured to the first pushchair 12 by first pivot means 22. Similarly, the first securement member 20 is secured to the second pushchair 14 by second pivot

means 24. The first securement member 20 comprises an elongate member having downwardly projecting ends at each end thereof, as shown in Figure 5, Figure 6 and Figure 7. Accordingly, the first securement member 20 is generally an extended inverted U shape. The ends of the first securement member 20 provide engagement portions to engage with first sleeves 26, 28 mounted on the first and second pushchairs 12, 14 respectively. The engagement portions of the first securement member 20 have a generally circular cross section and locate in and engage with the cylindrical sleeves 26, 28. The sleeves 26, 28 enable the first securement member 20 to pivot relative to the first and second pushchairs 12, 14 respectively. The first securement member 20 secures a part of the pushchairs 12, 14 adjacent to a front wheel to each other. Alternatively the first securement member 20 may secure a part of an arm rest of the first pushchair 12 to a part of an arm rest of the second pushchair 14.

The pushchair assembly 10 also comprises a second securement member 30. The second securement 30 secures a part of the first pushchair 12 to a part of the second pushchair 14 at a position spaced upwardly or above and behind or rearwardly the first securement member 20. The second securement member 30 may connect the armrest or a rear frame member of the first pushchair 12 to the armrest or a rear frame member of the second pushchair 14. The second securement member 30 secures and retains the first pushchair 12 and the second pushchair 14 in a second configuration in which the first and second pushchairs 12, 14 are located side by side. The second securement member 30 may be mounted to and permanently connected to the first pushchair 12. The other end of the second

securement member 30 may selectively engage in an engagement sleeve 32 provided on the second pushchair 14. The second securement member 30 comprises a tubular section having a downwardly projecting engagement portion at one end in order to selectively engage with the engagement sleeve 32. Alternatively, the second securement member 30 may engage with two sleeves provided on the first and second pushchairs 12, 14.

As shown in Figure 3 and Figure 4, the first pushchair 12 and the second pushchair 14 also have respective third engagement sleeves 34, 36 located adjacent to the respective front wheel located on the other side of the pushchairs 12, 14 relative to the first engagement sleeves 26, 28. The third engagement sleeves 34, 36 are arranged to engage securement means which may comprise a third securement member 38. The third securement member 38 and the corresponding third engagement sleeves 34, 36 may operate the same as the first securement member 20 and the corresponding sleeves 26, 28.

The third securement member 38 is arranged to secure the first pushchair 12 to the second pushchair 14 in the first configuration in which the pushchairs 12, 14 are in tandem. In the tandem configuration the first pushchair 12 is located in front of the second pushchair 14. In addition, the first pushchair 12 is facing backwards to the direction of travel and towards the second pushchair 14. Alternatively, the first pushchair 12 may comprise an adjustable or removable seat which may be rotated through 180° in order to face the direction of travel. The handle 18, 19 of one of the pushchairs 12, 14 may be removed

since only a single handle 18, 19 is required in the tandem configuration.

The third securement member 38 may be permanently mounted to one of the pushchairs 12, 14 whilst a single third engagement sleeve 34, 36 may be provided on the other pushchair. Alternatively, the second securement member 30 may also perform the function of the third securement member 38 since both securement members 30, 38 are not used concurrently.

In order to reconfigure the pushchair assembly 10 from the side by side configuration to the tandem configuration, firstly the second securement member 30 is disengaged from the second securement sleeve 32. The first pushchair 12 can then be pivotally moved relative to the second pushchair 14. The first pushchair 12 is rotated around the second pushchair 14 and the engagement portions of the first securement member 20 rotate within the or both sleeves 26, 28. Once the first pushchair 12 is facing the second pushchair 14, the third securement member 38 can be inserted into the third engagement sleeves 36, 38 provided on the first and second pushchairs 12, 14. Since the first pushchair 12 and the second pushchair 14 simply pivot relative to each other there is no requirement for any specialist equipment to reconfigure the pushchair assembly. In addition, the pivotal movement means that the securement member 20 does not have to be removed which may result in it being lost as the pushchair assembly is reconfigured. The reconfiguration is thereby simple and quick and can be performed whilst in relatively busy or confined areas.

In a further embodiment of a pushchair assembly 10, the first pushchair 12 is secured to the second pushchair 14 by a first securement member comprising single pivot means, as shown in Figures 8 to 13. The first securement member 20 comprises a first projecting member 60 projecting from the first pushchair 12 and a first projecting member 62 projecting from the second pushchair 14. The projecting members 60, 62 may provide arm rests for the respective pushchairs 12, 14. Each projecting member 60, 62 is permanently fixed at one end to the relevant pushchair 12, 14. The other end of the first projecting member 60 of the first pushchair 12 is secured to the outer end of the first projecting member 62 of the second pushchair 14 by pivot means. The pivot means comprises a pin 64 which locates through corresponding apertures located on the outer ends of the projecting members 60, 62. The pin 64 has retaining flanges 66, 68 to inhibit and prevent removal of the pin 64 from the apertures.

The projecting members 60, 62 have retaining apertures located adjacent to the relevant pushchair spaced from the pivot means. A securement element in the form of an engagement pin 70 is secured through the apertures in order to prevent movement of the first pushchair 12 relative to the second pushchair 14. Accordingly, the first and second pushchairs 12, 14 are secured in the side by side configuration.

In order to reconfigure the pushchair assembly 10, the engagement pin 70 is removed from the apertures and the first pushchair 12 is pivoted relative to the second pushchair 14 through the pivot means. The pushchair

assembly 10 has second projecting members 72, 74 located on the other lateral side of the pushchairs 12, 14 relative to the first securement members 60, 62. The pushchairs 12, 14 are pivoted relative to each other in order to face each other. In this configuration the engagement pin 70 can be located through apertures provided on the second projecting members 72, 74 in order to retain the pushchair assembly in a tandem configuration. In order to reconfigure the pushchair assembly from the tandem configuration to the side by side configuration the above action is reversed.

Another embodiment of a first securement member comprises a first projecting member 40 projecting from the first pushchair 12 and a first projecting member 42 projecting from the second pushchair. The projecting members 40, 42 are pivotally connected to each other by a pivot comprising a pin 47 which projects through apertures provided in the projecting members 40, 42. The pivot comprises a pin 47 having retaining flanges 46, 48 at each end thereof. The retaining flanges 46, 48 prevent the pin 47 from being inadvertently removed from the first and second projecting members 40, 42. Alternatively, the pin 47 may have a single upper retaining flange 48 in order for the pin 47 to be manually removed from the apertures.

The projecting members 40, 42 may be located on the front frame members of the pushchairs adjacent to the front wheels. The first projecting member 40 of the first pushchair 12 may locate underneath the first projecting member 42 of the second pushchair 14 when the first and second pushchairs 12, 14 are in the second configuration in which the pushchairs 12, 14 are located side by side.

Accordingly, the first and second projecting members 40, 42 are spaced laterally from the plane of the adjacent wheel. Alternatively, the projecting members 40, 42 may be angled outwardly relative to the respective pushchair 12, 14. The pushchair assembly 10 again comprises further means for securing and retaining the pushchair assembly 10 in the first configuration and the second configuration.

The pushchair assembly 10 may comprise three or more pushchairs secured in accordance with the above description. The pushchair assembly may comprise a modular system whereby a single pushchair may initially be obtained and further pushchairs obtained as and when required. The third and further pushchairs may be simply secured to the first and second pushchairs by a securement member which does not permit pivotal movement.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and

drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extend to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

CLAIMS

1. A pushchair assembly comprising a first pushchair and a second pushchair in which the first pushchair is secured to the second pushchair by a first securement member in both a first configuration, in which the first pushchair is located in front of the second pushchair and a second configuration, in which the first pushchair is located adjacent to one side of the second pushchair.

2. An assembly according to claim 1 in which the first securement member physically secures the first pushchair to the second pushchair.

3. An assembly according to claim 1 or claim 2 in which the first securement member is pivotally engaged to the first pushchair.

4. An assembly according to any preceding claim in which the first securement member is pivotally engaged to the second pushchair.

5. An assembly according to any preceding claim in which the first securement member is arranged, in use, to engage a part of the first and second pushchair at a location adjacent a respective front wheel.

6. An assembly according to any preceding claim in which the first pushchair faces the second pushchair in the first configuration.

7. An assembly according to any preceding claim in which a second securment member, in addition with the first

securement member, secures the first pushchair to the second pushchair in the first configuration.

8. An assembly according to claim 7 in which the second securement member, in addition to the first securement member secures the first pushchair to the second pushchair in the second configuration.

9. An assembly according to claim 7 or claim 8 in which the second securement member is arranged, in use, to engage a part of the first and second pushchair at a location rearwardly of the first securement member.

10. An assembly according to any one of claims 7 to 9 in which the second securement member is arranged, in use, to engage a part of the first and second pushchair at a location above the first securement member.

11. An assembly according to any preceding claim in which the assembly comprises securement means which, in addition with the first securement member …..

12. An assembly according to any preceding claim in which the assembly comprises securement means which, in addition with the first securement member, secures the first pushchair to the second pushchair in the second configuration.

13. An assembly according to claim 12 in which the securement means comprises a third securement member.

14. An assembly according to claim 13 in which the third securement member is mounted to one of the pushchairs and is selectively engaged with the other pushchair.

15. An assembly according to any preceding claim in which the assembly comprises a third pushchair which is secured to the first or second pushchair.

16. An assembly according to claim 15 in which the third pushchair is secured to the first or second pushchair by a second and first securement member.

17. A method of re-configuring a pushchair assembly comprising a first pushchair and a second pushchair, the method comprising securing the first pushchair to the second pushchair with a first securement member in both a first configuration, in which the first pushchair is located in the front of the second pushchair, and a second configuration, in which the first pushchair is located adjacent to one side of the second pushchair.

18. A method according to claim 17 in which the method comprises pivoting the first pushchair relative to the second pushchair between a first configuration and the second configuration.

19. A pushchair assembly substantively as herein described with reference to, and as shown in, any of the accompanying drawings.

20. A method of re-configuring a pushchair assembly substantially as herein described with reference to, and as shown in, any of the accompanying drawings.